

## Notes on neotropical *Psenulus* (Hymenoptera, Sphecidae, Psenini)

by

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**ABSTRACT.** — Descriptions are provided of the unknown female of *Psenulus aztecus* Bohart & Grissell, 1969 from Mexico and the unknown male of *Psenulus mayorum* Bohart & Grissell, 1969 from Honduras and Venezuela. A damaged specimen from Mexico, probably representing a new species, is briefly discussed.

Only four members of *Psenulus* have been recorded from America north of Mexico (Muesebeck and others, 1951). In Central and South America this genus seems to be even more poorly represented. *P. aztecus* (♂) and *P. mayorum* (♀) were described from Mexico by Bohart and Grissell (1969), each based on a single specimen.

Recently I received a few Psenini from the Canadian National Collection, Ottawa (CNC), the Cornell University, Ithaca (CU) and the American Museum of Natural History, New York (AMNH). This material included two males of *P. mayorum*, captured in Honduras and Venezuela, the latter being the first record of *Psenulus* from South America. Further, a small series from Mexico consisting of a few additional males of *P. aztecus* and, fortunately, also five females belonging to this species. Supplementary descriptions, first descriptions of the opposite sexes and figures of the male genitalia of both species are now presented in this paper.

In the collections of the British Museum (Natural History), London, is a female from Mexico which probably represents a new form of *Psenulus*. The apex of its gaster is missing, consequently only a short description, without a species name, is given.

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### *Psenulus aztecus* Bohart & Grissell

**Description of female.** — Length about 9 mm. Head black; mandibles whitish-yellow with dark apices; palpi whitish-yellow. Also whitish-yellow are scape of antennae, except in some specimens a smaller or greater part of back, and underside of base of flagellum; apical half of flagellum below orange-yellow. Thorax black; pronotal tubercles yellowish-white, tegulae yellowish-brown. Veins of wings dark brown. Legs including trochanters of fore and mid legs mostly yellowish-white; brown are: 2/3 to 3/4 of back of fore femora, in one specimen also basal half of foreside; mid femora, in some specimens except apical 1/3 or 2/5 of foreside; apical 1/2 to apical 1/3 of hind tibiae except a narrow whitish streak on back of tibiae. Hind femora dark brown or black. The hind tarsi vary between having a yellowish-white basitarsus to being entirely yellowish-brown or brown. Petiole black, gaster dark brown to black.

Raised part of interantennal carina narrow or very slightly broadened, ending below antennae in a distinct transverse carina. Clypeus very finely punctate, apical part almost shining, median part of anterior margin slightly emarginate (fig. 1). Frons, vertex and tempora shining, occipital carina rounded dorsally, ending below in hypostomal carina. Apex of mandibles bidentate. Antennae (fig. 1) somewhat clavate.

Pronotal corners rounded. Scutum, scutellum and metanotum shining, sparsely finely punctate; prescutal sutures distinct on anterior 3/4 of scutum. Propodeal enclosure with oblique carinae; propodeal suture narrow, dorsally slightly wider and with a few transverse carinae. Back of propodeum smooth and shining, apex and posterior half of sides of propodeum finely reticulato-carinate. Sides of thorax shining, minutely punctate. Anterior oblique suture foveolate. Legs normal. First recurrent vein of fore wings ending in second submarginal cell, second recurrent vein in third submarginal cell. Petiole over 1 1/2 times as long as first tergite, mostly cylindrical, apex dorsally with small triangular depression. Gaster slender,

indistinctly punctate; length of first tergite about  $1 \frac{1}{3}$  times width at apex. Pygidial area (fig. 2) reduced to a narrow carina which in lateral aspect is more raised in the middle, apex with a minute shining area, which is laterally and posteriorly margined by a fine carina.

Pubescence of head and thorax whitish, on face more silvery and appressed. Epicnemial areas below with a round patch of dense pale golden pubescence. Petiole dorso-laterally with a row of sparse short hairs, laterally a few long erect hairs. Pubescence of gaster yellowish-grey.

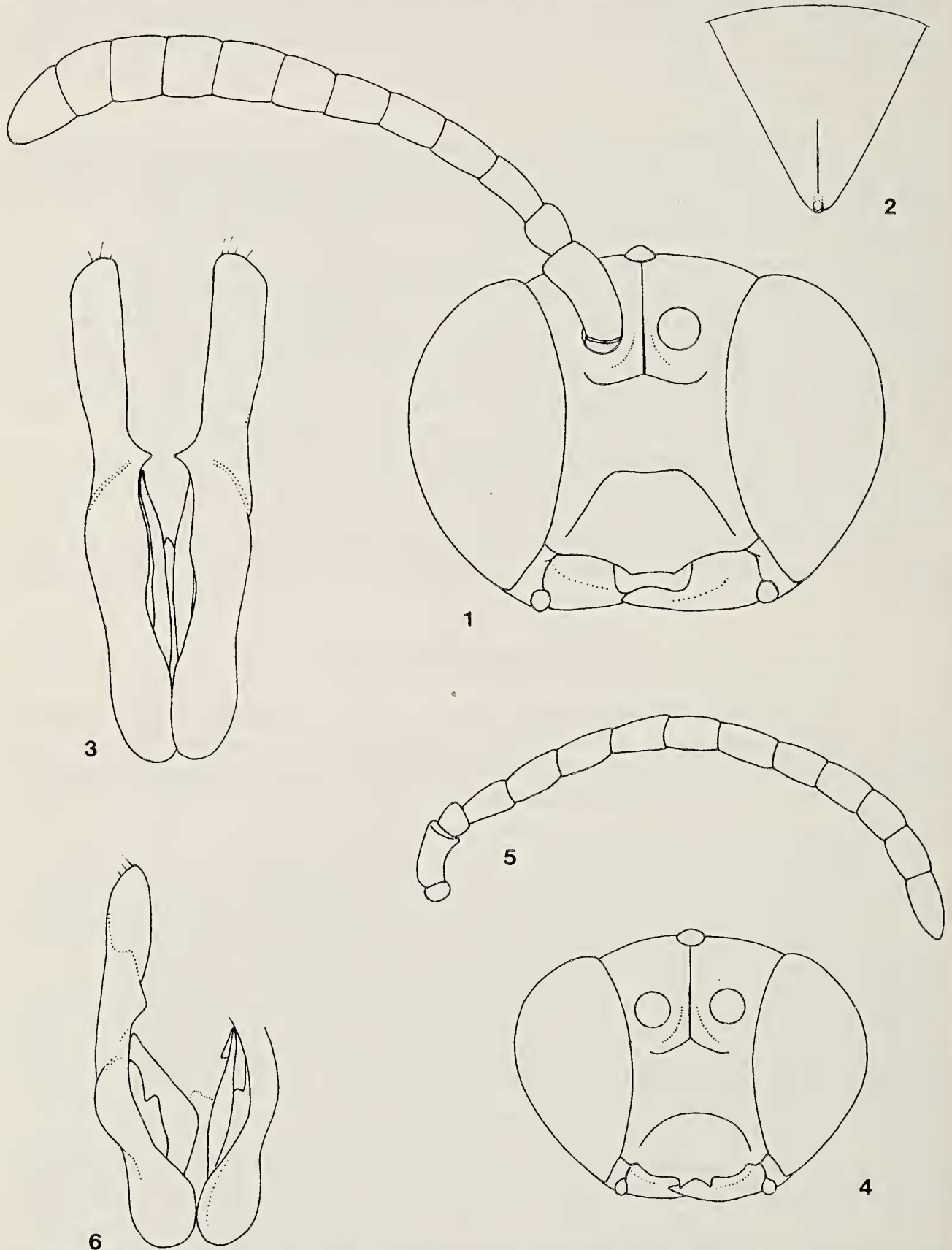


Fig. 1—3. *Psenulus aztecus* Bohart & Grissell. 1—2, head and pygidial area of ♀; 3, genital apparatus of ♂. Fig. 4—6. *Psenulus mayorum* Bohart & Grissell, ♂. 4, head; 5, left antenna; 6, genitalia, left paramere omitted.

Sternites 4 and 5 with dense, erect and short yellowish-grey pubescence, last sternite with pale golden pubescence directed backwards.

Male. — Similar. Underside of flagellum orange-yellow. No tyloidea. Dorsal half of back of propodeum smooth and shining, lower half of back and posterior half of sides reticulato-carinate, coarser than in female, and with a few stronger transverse rugae.

Genitalia (fig. 3) long and slender, pale yellowish-brown. Distinct oblique ridge between basiparameres and parameres, base of parameres on inner side with triangular, apically rounded tooth.

Pubescence on lower part of epicnemial areas less conspicuous. Sternites 4 and 5 normally pubescent.

Specimens examined. — Mexico: Sinaloa, 15 mi. W. El Palmito, 5000 ft, 3 ♀, 16-20 July 1964; 4.5 mi. W. El Palmito, 6500 ft, 1 ♀, 20 July 1964; Sinaloa, 20 mi. E. Concordia, 3000 ft, 1 ♀, 12 Aug. 1964, 4 ♂, 4-12 Aug. 1964, W. R. M. Mason (CNC).

*P. aztecus* differs, like *P. mayorum*, from the nearctic species of *Psenulus* by the narrow inter-antennal carina and the shape of the pygidial area, which is almost entirely reduced to a single high carina.

This species is easily distinguished from *P. mayorum* by the barely protruding and slightly emarginate clypeal margin, the rounded pronotal corners and the black colour of the pronotum. The occipital carina is normally rounded dorsally, not straight as in *P. mayorum*.

A female from Sinaloa, 20 mi. E. of Concordia, altitude 3000 ft, captured 4 Aug. 1964, simultaneously with two of the males recorded above, differs in having the gaster beyond the petiole almost entirely orange-red, also the apical half of the ventral plate of the petiole is reddish. The base of the first tergite is slightly brownish (CNC).

#### *Psenulus mayorum* Bohart & Grissell

Description of male. — Length about 7 mm. Head black; anterior margin of clypeus reddish, mandibles yellow with reddish apex. Palpi yellowish. Antennae orange-brown, flagellum somewhat brownish dorsally. Thorax black, pronotum yellow, corners dark brown. Pronotal tubercles yellow. Tegulae yellowish-brown. Fore and mid legs including trochanters yellow, coxae and outer base of femora brown; in the male from Honduras fore and mid tibiae externally also slightly brownish. Hind legs brown; trochanters, base of hind tibiae and apices of first four segments of hind tarsi yellowish. Veins of wings brown. Gaster including petiole blackish-brown, last segment yellowish-brown.

Raised part of frontal carina between antennae narrow, ending in a transverse carina below antennae. Face densely punctate. Anterior margin of clypeus (fig. 4) with small triangular emargination and two triangular teeth, distance between these teeth about 1/6 of total distance at that level between the eyes. Frons slightly raised, shining, finely punctate, interstices a few times larger than diameter of punctures. Vertex shining, interocellar area raised. Tempora finely punctate. Dorsal part of occipital carina straight, ending below in hypostomal carina. Antennae slender (fig. 5). No tyloidea. Apex of mandibles bidentate, lower tooth acute.

Anterior carina of pronotum high, pronotal corners sharp. Scutum shining, sparsely finely punctate. Prescutal sutures distinct on anterior 2/3 of scutum. Scutellum shining, almost impunctate. Metanotum with fine, hairbearing punctures. Propodeal enclosure depressed, lateral parts with a few oblique carinae, central part hexagonal. Propodeum just behind enclosed area narrowly smooth, back and posterior part of sides coarsely reticulato-carinate, median groove about as long as upper 2/3 of back. Mesopleura shining, very sparsely finely punctate; hypo-epimeral area impunctate. Anterior oblique suture foveolate, widened upper part with a few transverse carinae. First recurrent vein of fore wings interstitial, second recurrent vein ending in third submarginal cell. Petiole slender, almost cylindrical, about 1 1/3 times as long as first tergite, in dorsal view. Gaster slender, first tergite about 1 1/2 times as long as width at apex.

Genital apparatus (fig. 6) small and slender, yellowish-white, apex transparent. Parameres on inner side near base triangularly produced, apices somewhat pointed.

Pubescence whitish, long and rather dense on vertex and on thorax, shorter on gaster. Face, lower part of frons, and tempora silvery, mostly appressed, pubescent. Petiole with lateral rows of minute hairs dorsally, sides with a few long erect hairs. Antennae with short, dense pubescence.

Venezuela: 1 ♂, San Esteban, Carabobo, 2 Jan. 1940 (CU).

Honduras: 1 ♂, La Ceiba, 19 Dec. 1916, F. J. Dyer (AMNH).

Apart from sexual dimorphism these males differ from the female (holotype) from Mexico in having yellower legs and no mid-ventral yellow stripe. Yet there is little doubt that they are conspecific. For the moment the scanty material available does not allow speculative remarks on the occurrence of subspecies, if any. Some species belonging to other Psenine genera have penetrated from Mexico into South America, either along the north coast, or via the west side of the Andes mountain chain.

The shape of the clypeal margin of the male *P. mayorum* is the same as that of the male *P. aztecus*. However, *P. mayorum* is easily distinguished by the straight occipital carina, the angular pronotal corners and the largely yellow pronotum.

#### *Psenulus* sp. nov.

A female from Mexico, Atoyac, Vera Cruz, collected in April by H. H. Smith (BM 1903-297) is briefly mentioned here. Structurally it resembles the female of *P. aztecus* but the transverse carina below the antennae is less distinct. Unfortunately the last two gastral segments are missing so that the shape of the pygidial area is unknown.

The colour is quite different from that of the preceding species. Antennae almost entirely orange-yellow. Thorax black; dorsal side of pronotum and pronotal tubercles whitish, tegulae yellowish. Fore and mid legs including trochanters pale yellow, hind legs including trochanters orange-yellow. Gaster including petiole yellowish-red.

#### REFERENCES

- Bohart, R. M., & E. E. Grissell, 1969. New species of Psenini (Hymenoptera: Sphecidae). — *Pan-Pacif. Ent.* 45: 216—221.
- Krombein, K. V., 1951. In: C. F. W. Muesebeck, Karl V. Krombein, Henry K. Townes and others. Catalog of Hymenoptera of America north of Mexico. — *Agriculture Monogr.* 2: 958.

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AMPHIPYRA BERBERA RUNGS IN HET BINNENLAND (LEP., NOCTUIDAE). De nog niet zo lang geleden in ons land ontdekte *A. berbera* is in de loofhoutgebieden van de duinen een gewone soort. De noordelijkst bekende vindplaats is nu Egmond-Binnen, waar Br. F. Melkert de vlinder heeft aangetroffen. In het binnenland is *berbera* evenwel steeds een rariteit gebleven. Bij het doorkijken van het materiaal dat de heer A. van Tuyl in 1976 verzameld had, zag ik tot mijn verrassing, dat daar drie exemplaren van de soort uit Gelderland bij waren. Twee daarvan waren op 6.VIII te Kootwijk gevangen, het derde op 4.IX op dezelfde vindplaats. Deze sluit goed aan bij Hoog-Soeren, vanwaar J. Lucas een exemplaar uit 1956 bezit. — B. J. Lempke.

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VOORJAARSMIGRATIE VAN CYNTHIA CARDUI (LINNAEUS) IN LYBIË (LEP., NYMPHALIDAE). Beide paasdagen (18 en 19.IV.1976) hadden we in de woestijn Distelvlinders met grote snelheid zien passeren. Als er eentje even op de grond ging zitten, was hij helemaal niet te benaderen. Wel bleven deze vlinders geruime tijd om ons of de auto heen cirkelen. Ze trachten te lokken met water had geen succes. Op de 19de lukte het met veel geduld 's avonds rond 6 uur in de wadi Sufergine (31°52'N.B., 15°02'O.L.) er een paar in handen te krijgen. G. Kruseman Vanhouten, Tripoli, L. A. R.